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Robin, E. [US/US]; 7490 Brompton, #172, Houston, TX 77025 (US). SCOTT, Graham, B., I. [NZ/US]; 24507 Screech owl Ct., Katy, TX 77494 (US).

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(74) Agents: TUMEY, Tod, T. et al.; CONLEY ROSE, P.C., P. O. Box 3267, Houston, Texas 77253-3267 (US).

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(71) Applicant (*for all designated States except US*):
WILLIAM MARSH RICE UNIVERSITY [US/US];
6100 South Main, Houston, TX 77251-1892 (US).

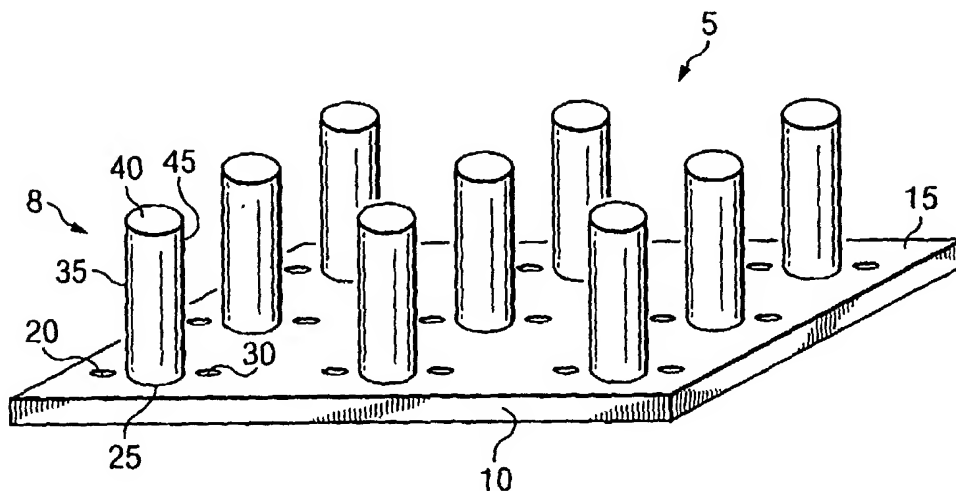
(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **BARRON, Andrew, R.** [GB/US]; 241 Asbury, Houston, TX 77007 (US). **FLOOD, Dennis, J.** [US/US]; 161 Forest Street, Oberlin, OH 44074 (US). **WHITSITT, Elizabeth, A.** [US/US]; 806 Lamonte Lane, Houston, TX 77018 (US). **ANDERSON,**

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(54) Title: METHOD FOR CREATING A FUNCTIONAL INTERFACE BETWEEN A NANOPARTICLE, NANOTUBE OR NANOWIRE, AND A BIOLOGICAL MOLECULE OR SYSTEM



(57) Abstract: A field effect transistor and a method for making the same. In one embodiment, the field effect transistor comprises a source; a drain; a gate; at least one carbon nanotube on the gate; and a dielectric layer that coats the gate and a portion of the at least one carbon nanotube, wherein the at least one carbon nanotube has an exposed portion that is not coated with the dielectric layer, and wherein the exposed portion is functionalized with at least one indicator molecule. In other embodiments, the field effect transistor is a biochem-FET

WO 2005/000735 A3



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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US CL : 257/288,E51.038,E51.04; 977/DIG/1

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 257/288,E51.038,E51.04; 977/DIG/1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST, NATURE, SCIENCE, search terms: nanotube, nanowire, DNA, sensor, and/or functionalization

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/0117669 A1 (LIEBER et al.) 29 August 2002 (29.08.2002), see entire document.	1-36
A	US 2002/0130333 A1 (WATANABE et al.) 19 September 2002 (19.09.2002), Figs. 1-11.	1-36
A	KONG et al., Nanotube Molecular wires as Chemical Sensors, Science, 28 January 2000, Vo. 287, pages 622-625, Figs. 1-3	1-36

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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Facsimile No. (703) 305-3230

Authorized officer

Shouxiang Hu

Telephone No. 571-272-1950